FORM PTO-1390 (REV. 5-93)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER **10191/1833**

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)
09/857677

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED:
PCT/DE99/03611	**12 November 1999 (12.11.99)**	**07 December 1998 (07.12.98)**

TITLE OF INVENTION
TELECOMMUNICATION TERMINAL HAVING CHARACTER RECOGNITION

APPLICANT(S) FOR DO/EO/US
Joerg-Michael HASEMANN

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information.

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) immediately rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U S.C. 371(c)(3))
   a ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)) (unsigned).
10. ☒ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern other document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A **FIRST** preliminary amendment.
14. ☒ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information: International Search Report (translated), Preliminary Examination Report and PCT/RO/101.

EXPRESS MAIL NO.: EL244504705

U.S. APPLICATION NO if known, see 37 C.F.R.1.5	INTERNATIONAL APPLICATION NO	531 Rec'd PCT 07 JUN 2001 ATTORNEY'S DOCKET NUMBER
09/857677	PCT/DE99/03611	10191/1833

17. ☒ The following fees are submitted:	CALCULATIONS | PTO USE ONLY	
Basic National Fee (37 CFR 1.492(a)(1)-(5)): Search Report has been prepared by the EUROPEAN PATENT OFFICE or JPO ..... q$860.00		
International preliminary examination fee paid to USPTO (37 CFR 1.482) $690.00		
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)) $710.00		
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO $1,000.00		
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) $100.00		
ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 860	
Surcharge of $130.00 for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$	

Claims	Number Filed	Number Extra	Rate		
Total Claims	18- 20 =	0	X $18.00	$ 0	
Independent Claims	1 - 3 =	0	X $80.00	$ 0	
Multiple dependent claim(s) (if applicable)			+ $270.00	$	
			TOTAL OF ABOVE CALCULATIONS =	$ 860	
Reduction by ½ for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28).				$	
			SUBTOTAL =	$ 860	
Processing fee of $130.00 for furnishing the English translation later the ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(f)). +				$	
			TOTAL NATIONAL FEE =	$ 860	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). $40.00 per property +				$	
			TOTAL FEES ENCLOSED =	$ 860	
			Amount to be: refunded		$
			charged		$

a. ☐ A check in the amount of $_____ to cover the above fees is enclosed.

b. ☒ Please charge my Deposit Account No. 11-0600 in the amount of **$860.00** to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 11-0600. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

By: Richard L. Mayer (Reg. No. 41,172)

Richard L. Mayer
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DATE

[10191/1833]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Joerg-Michael HASEMANN
Serial No.	:	To Be Assigned
Filed	:	Herewith
For	:	TELECOMMUNICATION TERMINAL HAVING CHARACTER RECOGNITION
Art Unit	:	To Be Assigned
Examiner	:	To Be Assigned

Assistant Commissioner
for Patents
Washington, D.C. 20231
Box Patent Application

PRELIMINARY AMENDMENT AND
37 C.F.R. § 1.125 SUBSTITUTE SPECIFICATION STATEMENT

SIR:

Please amend the above-identified application before examination, as set forth below.

IN THE SPECIFICATION AND ABSTRACT:

In accordance with 37 C.F.R. § 1.121(b)(3), a Substitute Specification (including the Abstract, but without claims) accompanies this response. It is respectfully requested that the Substitute Specification (including Abstract) be entered to replace the Specification of record.

IN THE CLAIMS:

On the first page of the claims, first line, change "What is claimed is:" to:
--What Is Claimed Is:--.

Please cancel original claims 1 to 11, without prejudice, and cancel substitute claim1, without prejudice, in the underlying PCT Application No. PCT/DE99/03611.

EL244504705

Please add the following new claims:

12. (New) A telecommunication terminal, comprising:

a plurality of data input units including at least one pressure sensor element;

a character recognition unit; and

a pressure receiving element acting jointly with the at least one pressure sensor element so that a movement of the pressure receiving element on a surface is detectable by the at least one pressure sensor element, wherein:

the movement of the pressure receiving element detected by the at least one pressure sensor element is convertible into signaling information by the character recognition unit, and

the surface is able to be written upon by the movement of the pressure receiving element.

13. (New) The telecommunication terminal according to claim 12, wherein:

the character recognition unit recognizes alphanumeric characters.

14. (New) The telecommunication terminal according to claim 12, further comprising:

a transmitting unit via which a signal can be dispatched in dependence on the signaling information.

15. (New) The telecommunication terminal according to claim 12, further comprising:

a plurality of reproduction devices, wherein:

the plurality of data input units includes a plurality of confirmation devices,

the signaling information is representable by the plurality of reproduction devices, and

the signaling information is correctable by the plurality of confirmation devices.

16. (New) The telecommunication terminal according to claim 15, wherein:

the plurality of confirmation devices includes a plurality of keys.

17. (New) The telecommunication terminal according to claim 15, wherein:

the signaling information is representable by the plurality of reproduction devices in accordance with at least one of an optical form and an acoustic form.

18. (New) The telecommunication terminal according to claim 12, wherein:

the pressure receiving element includes a writing tip.

19. (New) The telecommunication terminal according to claim 12, wherein:

an input function and an operating function can be activated in dependence on the signaling information according to a menu-driven operation.

20. (New) The telecommunication terminal according to claim 12, wherein:

in dependence upon the signaling information, a radio mode can be activated and operated.

21. (New) The telecommunication terminal according to claim 20, wherein:

the radio mode is for at least one of a voice communication and for an exchange of brief messages.

22. (New) The telecommunication terminal according to claim 21, wherein:

the brief messages include SMS messages.

23. (New) The telecommunication terminal according to claim 20, wherein:

the radio mode can be activated and operated for an input of telephone numbers.

24. (New) The telecommunication terminal according to claim 12, wherein:

in dependence upon the signaling information, a memory mode can be activated and operated.

25. (New) The telecommunication terminal according to claim 24, wherein:

the memory mode can be activated and operated for entering at least one of a telephone entry and a notebook entry into a memory.

26. (New) The telecommunication terminal according to claim 15, wherein:

in dependence upon the signaling information, a calculator mode can be activated and operated, and

the signaling information is processable and calculation results are displayable in accordance with an operation of the plurality of reproduction devices.

27. (New) The telecommunication terminal according to claim 12, wherein:

in dependence upon the signaling information, an alarm clock mode can be activated and operated.

28. (New) The telecommunication terminal according to claim 12, further comprising:

a data interface for transmitting data.

29. (New) The telecommunication terminal according to claim 28, wherein:

the data interface includes an infrared interface.

Remarks

This Preliminary Amendment cancels original claims 1 to 11, without prejudice, and cancels substitute claim 1, without prejudice, in the underlying PCT Application No. PCT/DE99/03611. The Preliminary Amendment also adds new claims 12-29. The new claims conform the claims to U.S. Patent and Trademark Office rules and do not add new matter to the application.

In accordance with 37 C.F.R. § 1.121(b)(3), the Substitute Specification (including the Abstract, but without the claims) contains no new matter. The amendments reflected in the Substitute Specification (including Abstract) are to conform the Specification and Abstract to U.S. Patent and Trademark Office rules or to correct informalities. As required by 37 C.F.R. § 1.121(b)(3)(iii) and § 1.125(b)(2), a Marked Up Version Of The Substitute Specification

comparing the Specification of record and the Substitute Specification also accompanies this Preliminary Amendment. Approval and entry of the Substitute Specification (including Abstract) are respectfully requested.

The underlying PCT Application No. PCT/DE99/03611 includes an International Search Report, dated April 26, 2000, and an International Preliminary Examination Report, dated March 15, 2001, copies of which are submitted herewith.

Applicant asserts that the subject matter of the present application is new, non-obvious, and useful. Prompt consideration and allowance of the application are respectfully requested.

Respectfully Submitted,

KENYON & KENYON

By: D. Wright (Reg. No. 41,172)

Dated: 6/7/01

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[10191/1833]

TELECOMMUNICATION TERMINAL HAVING CHARACTER RECOGNITION

Background Information

The present invention starts out from a telecommunication terminal having data input devices according to the definition of the species in the main Claim.

Telecommunication terminals, especially mobile telephones, are generally known, which carry keys, in particular alphanumeric keyboards, on their housing surfaces.

Summary of the Invention

The telecommunication terminal according to the present invention, having the features of the main Claim, has the advantage, as opposed to these, that data for controlling the telecommunication terminal can be input using pressure sensor elements, and this partially eliminates the need for keys for data input. This makes possible a smaller type of construction of the telecommunication terminal. Furthermore, costs are reduced by the saving in keys for data input and the production effort is simplified. In addition, this reduces the weight of the telecommunication terminal.

As a result of the measures specified in the dependent claims, advantageous further refinements and improvements of the telecommunication terminal, indicated in the main claim, are possible.

It is particularly advantageous that a character recognition unit is provided, especially for recognition of alphanumeric characters, which makes possible the input of any message characters at all in cooperation with the pressure sensor elements.

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It is also an advantage that the telecommunication terminal includes a transmitting device via which signals can be transmitted in dependence on signaling information. This makes possible characters adapted to a user's writing habits and a logging of characters input into the telecommunication terminal by a writing process.

It is also of advantage that the telecommunication terminal includes reproduction and confirmation facilities. This makes characters, input by means of the pressure sensor element and the character recognition unit, correctable, and a user can limit himself in the correction of input data, by correcting, for instance, only a character input in error.

A further advantage is that the pressure receiving element is formed as a writing tip, so that during a writing process the input is automatic.

It is a still further advantage that input and operating functions of the telecommunication terminal can be activated in dependence on signaling information, particularly menu-controlled. This makes possible a simple and intuitive use of all functionalities of the telecommunication terminal.

Furthermore, it is advantageous that a memory mode can be activated, in dependence upon the input signaling information, which is provided for entering, for instance, telephone book or notebook entries into a memory of the telecommunication terminal. This yields advantageous additional utilization possibilities of this telecommunication terminal, particularly as address book and/or appointment diary.

It is also of advantage to provide a calculating mode, whereby the telecommunication terminal becomes usable for carrying out calculating operations.

Beyond that, it is of advantage to provide an alarm mode which can be activated and operated, so that the telecommunication terminal can be used as an alarm clock.

Finally, it is advantageous to provide a data interface, especially an infrared interface, in the telecommunication terminal, whereby data can be exchanged, for instance, with other telecommunication terminals or even a data processing installation.

Brief Description of the Drawings

An exemplary embodiment of the present invention is represented in the drawings and explained in detail in the following description.

The figures show:

Figure 1	a block diagram of a telecommunication terminal,
Figure 2	an illustration in perspective of the telecommunication terminal,
Figure 3	a top view of a second specific embodiment of a pressure receiving element,
Figure 4	a side view of the second specific embodiment of the pressure receiving element along section A-B of Figure 3,
Figure 5	a flow diagram of character recognition and
Figure 6	a block diagram of a character recognition unit.

Description of the Exemplary Embodiment

Figure 1 shows a block diagram of a telecommunication terminal 10. The telecommunication terminal 10 can be designed cord-dependent or cordless. A design for a cordless telecommunication terminal can be for a mobile telephone, a cordless telephone or the like. The telecommunication terminal 10 includes data input devices 140 and reproduction devices 120, both connected to a control device 190. The telecommunication terminal 10 also includes a transmitting device 160 and a receiving device 180, which are also both connected to a controlling device 190. In one advantageous specific embodiment of the telecommunication terminal 10 a data interface is provided, which permits the exchange of data between the telecommunication terminal 10 and a further unit, such as a second telecommunication terminal 10 or even a data processing installation. The data interface is not shown expressly, but the transmitting device 160 includes the subsection of the data interface for transmitting data, and the receiving device 180 includes the subsection of the data interface for receiving data. A memory 192 is assigned to the control device.

In Figure 2 the telecommunication terminal 10 is shown in perspective. The telecommunication terminal 10 includes a housing 100 and a pressure sensor element 220. In

this exemplary embodiment the telecommunication terminal 10 includes a first pressure sensor element 201, a second pressure sensor element 202 and a third pressure sensor element 203. Movements carried out with the telecommunication terminal 10 on a surface, wherein the pressure receiving element 220 touches the surface at least intermittently, can be detected by the pressure sensor elements 201, 202, 203. In this connection, the pressure receiving element 220 transmits the forces exerted by the surface to the pressure sensor elements 201, 202, 203. The pressure sensor elements 201, 202, 203 are particularly positioned in such a way that the pressure receiving element 220 transmits at any one time a component of the movement to one of the pressure sensor elements 201, 202, 203. For example, the first pressure sensor element 201 and the second sensor element 202 are poaitioned at the side of pressure receiving element 220, rotated from each other by about 90^0, and the third pressure sensor element 203 is positioned at a first end of the pressure receiving element 220. Thereby, movements on a surface, such as on a sheet of paper, are detected in such a way that a movement of the telecommunication terminal 10 in a first movement direction on the surface is detectable either exclusively by the first pressure sensor element 201 or, in a first circumstance, by the first and the second pressure sensor element 201, 202, and that a movement of the telecommunication terminal 10 in a second movement direction, which is rotated with respect to the first movement direction by an angle, in particular of 90^0, is detectable either exclusively by the second pressure sensor element 202 or, in a second circumstance, by the first and the second pressure sensor elements 201, 202. A pressing of the telecommunication terminal 10 upon the surface is detectable by the third pressure sensor element 203.

Figure 2 illustrates in exemplary fashion a first specific embodiment of the pressure receiving element 220. A second end of the pressure receiving element 220, lying opposite to the first end, is designed as a writing tip 222, for instance, in the form of a ballpoint tip or the like, and this makes it possible to note down the movements the telecommunication terminal 10 makes in, for instance, drawing a picture on the surface. A written character is then visible on the surface, particularly on a paper surface or the like, which makes possible a secure and checked data input. In an advantageous specific embodiment of the telecommunication terminal 10, the pressure receiving element 220 includes a reservoir, in particular for accommodating printing ink or the like. By means of the receptacle 224 the pressure receiving element 220 is locked in place in the housing 100 of the telecommunication

terminal 10. At a second end of the pressure receiving element 220, the pressure sensor elements 201, 202, 203 pick up the forces impinging upon the writing tip 222 and transmitted by the pressure receiving element 220. In an exemplary embodiment, the telecommunication terminal 10 is formed, for instance as a ballpoint pen, pencil, or the like. The pressure receiving element can be made of a refill, particularly for ballpoint pens, feltpoint pens and the like, having a tip which fulfills the function of the writing tip 222, The input of data via the pressure sensor elements 201, 202, 203 into the telecommunication terminal 10 takes place, according to the exemplary description of the specific embodiment, by the user's holding the telecommunication terminal 10 as if writing with a ballpoint pen, and as if writing characters on a paper surface or the like. The movements, which the telecommunication terminal executes by writing on the surface, are detected and used for data input in the manner described. It is thus possible to control the telecommunication transmitting device 10 by writing directly memorable control orders, such as, "Call 12345", "Telephone book Peter: 1234511," "Call Peter", or the like.

The reproduction devices 120 include an indicator element 122, such as an LCD display, and a receiver inset 124. The input devices 140 include confirmation devices 142, especially keys, and a microphone 144.

The reproduction devices 120 and the input devices 140 are particularly positioned in such a way that easy and simple operation of the telecommunication terminal 10 is possible, on the one hand with regard to the data input into the telecommunication terminal 10 by means of character recognition, and on the other hand with regard to other utilization possibilities of the telecommunication terminal 10, such as telecommunication. For this purpose, in the exemplary embodiment, the confirmation devices 142 are installed in a region between the pressure receiving element 220 and the display element 122, so that they can be easily used by the user for correcting data input. Furthermore, the microphone 144 in the exemplary embodiment is positioned in the region of the pressure receiving element 220, and the receiver inset 124 is positioned at the opposite end of the telecommunication terminal 10, so that use of the telecommunication terminal 10 as a telephone is made easier, because the mouth and ear of the user can easily be brought into the vicinity of the corresponding input and reproduction devices.

In Figure 3 the telecommunication terminal is shown in a top view, and in Figure 4 in a sectional illustration along the sectional line AB in Figure 3. The pressure receiving element 221 is designed in Figures 3 and 4 in a second specific embodiment as a sphere. A second specific embodiment of the mounting 225 locks in place the pressure receiving element 221 in housing 100. In case of a movement of the telecommunication terminal 10 on a surface, in which the pressure receiving element 221 touches the surface, the surface has a dynamic effect on the pressure receiving element 221 which is passed on by the pressure receiving element 221 to the pressure sensor elements 201, 202, 203. The positioning of pressure sensor elements 201, 202, 203 has the effect that each of them receives the force or the pressure data which belong to a component of the movement, similar to what was described in the light of Figure 2.

The telecommunication terminal 10 is not necessarily formed like a ballpoint pen or in the shape of a pencil. For example, a telecommunication terminal 10 can also be provided in the form of a mobile telephone (Handy), in which the pressure receiving element 220, 221 is positioned particularly at one corner, curve or the like, of the mobile telephone. The pressure receiving element 220, 221 can, for example be designed to be extendable so that the writing fluid can only exit from the pressure receiving element 220, 221 during data input into the telecommunication terminal 10 by way of the pressure sensor elements 201, 202, 203. But the pressure receiving element 220, 221 can also be positioned in a fixed way, and designed either open on the telecommunication terminal 10 or covered by a covering device.

Figure 5 represents a flow diagram for character recognition in the telecommunication terminal 10. The dynamic effects brought about on the pressure receiving element 220, 221 by the movements of the telecommunication terminal 10 on the surface are transmitted from the pressure receiving element 220, 221 to the pressure sensor elements 220. The pressure sensor elements 201, 202, 203 transduce the force data 500 into signals 520, in particular electrical signals. The pressure sensor elements 201, 202, 203, which are connected to a character recognition unit 240, conduct the signals 520 further on to the character recognition unit 240, which converts the signals 520 into character data 550.

Figure 6 is a block diagram illustrating conversion of the signal information 520 into character data 550. The character recognition unit 240 includes a digital-analog conversion

unit 241, which is connected to a central unit 244. Both a standardizing unit 242 and a recognition unit 243 are connected to the central unit. The central unit 244 is also connected to the confirmation devices 142.

After the execution of a movement of the telecommunication terminal 10 on the surface, the signals 520, received by the character recognition unit 240, are first digitized in the analog-digital conversion unit 241, whereby first data are produced. The standardizing unit 242 contains second data corresponding to the characters to be recognized, and which are compared with the first data in the recognition unit 243, wherein a most probable first character is selected from a set of possible first characters, in dependence on the signal information 520. The most probable first character is made available as character data 550 by the character recognition unit 240 to the control unit 190 of the telecommunication terminal 10.

In an advantageous further development of the telecommunication terminal 10, the second data are changeable or open-ended, so that, on the one hand, first characters from the set of possible first characters can be substituted by freely selectable first characters and/or, on the other hand, freely selectable first characters can be added to the set of possible first characters.

By use of the confirmation devices 142 it is possible to have an influence on the recognition of the first characters in the recognition unit 243. Using a first correction feature, an erroneously recognized first character can be replaced by a second character from the set of possible first characters. Using a second correction feature, a completely new third character, that is to be recognized, can be input, if necessary, after repeated but fruitless use of the first correction feature, by executing a movement on the surface which corresponds to the third character, using the telecommunication terminal.

The signaling information 550 recognized by the character recognition unit 240 is conducted to the control unit 190 for controlling the telecommunication terminal 10.

In dependence upon the signaling information 550, the control unit activates the reproduction devices 120, the transmitting device 160 and/or the receiving device 180. In Figure 2 the

display element 122 and the receiver inset 124 are described as examples of optical or acoustical reproduction devices 120, respectively Alternatively or in addition, reproduction devices 120 can be provided whose reproduction effect is made accessible to the user by sense of touch, and which can thus be viewed as haptic reproduction devices 120, in particular vibration devices for signaling such as incoming telephone calls.

After activation of the reproduction devices 120 by the control unit 190, the first data are reproducible which are generated in dependence on second, third or fourth data, the second data being generated by the input devices 140 and include, in particular, the signaling information; the third data being stored in memory 192; and the fourth data being received by receiving device 180.

For checking the correctness of the signaling information 550 by the user, the signaling information 550 can be displayed on the display element 122. In the same way, results of calculating operations can be displayed on the display element 122. Third data are displayed on the display element 122, especially stored telephone book data, address book data, appointment diary data and/or notebook data. Fourth data, in particular received short messages, e.g. SMS small messages, are displayed on the display element 122. Acoustical signals can be made audible by the receiver inset 124, for correcting, for example, the data input by movements of the telecommunication terminal 10 on a surface.

Furthermore, the receiver inset 124 can make audible (items) not only in dependence upon third data, such as for remembering stored appointments and/or alarm clock times, but also in dependence upon fourth data, such as for signaling an incoming telephone call. Beyond that, data can be reproduced in combined form on a plurality of reproduction devices 120. For example, the reminder of an appointment can be made audible on the receiver inset 124, and simultaneously place and subject content of the appointment can be displayed on the display element 122.

Following activation of the transmitting device 160 by control unit 190, fifth data are transmitted in dependence upon second data, especially signaling information 550, upon third data and/or upon fourth data. In dependence upon signaling information 550, for example, ringing signals can be dispatched to a second telecommunication terminal, which may, for

instance, initiate a telephone conversation, or signal the transmission of a short message to the participant. Fifth data can also be transmitted in dependence on third data. A telephone call can, for instance, be transmitted to the second telecommunication terminal at a previously stored point in time. In dependence on fourth data, for example control data received for transmission of a brief message which were received by the second telecommunications terminal, fifth data can be transmitted to a third telecommunications terminal.

In another advantageous specific embodiment of the telecommunication terminal 10, the memory 192 assigned to control unit 190 has contents for the menu-driven control of the telecommunication terminal 10, particularly data on various menu points and their pertaining control commands. Menu contents and their representation on the reproduction devices 120, particularly on the display element 122, can be provided permanently stored and invariable and/or programmable and changeable. Changing, replacing or adding to menu items can be done in dependence upon second data, particularly signaling information 550 or in dependence upon fourth data.

In a further advantageous specific embodiment of the telecommunication terminal 10, the transmitting unit 160 and the receiving unit 180 are designed in such a way that wireless communication, particularly according to the GSM standard, can be operated. The telecommunication terminal 10 can be operated especially for voice communication and/or for exchanging short messages, in particular, SMS messages.

In yet another further advantageous specific embodiment of the telecommunication terminal 10, the memory 192, assigned to control unit 190, includes storage capacity for occupancy by the personal data of a user, especially address book data, telephone book data, appointment data and/or notebook data.

In a further advantageous specific embodiment, the telecommunication terminal 10 includes a calculating unit assigned to the control unit 190, with which calculating operations can be carried out in a calculating mode of the telecommunication terminal 10.

In still another further improvement, the telecommunications terminal 10 includes a clock which acts together with the memory 192, assigned to the control unit 190, in such a way that

functions of the telecommunication terminal 10 can be activated in dependence upon third data at predetermined points in time, such as stored appointment times or alarm clock times.

What is claimed is:

1. A telecommunication terminal (10) having data input devices (140), wherein the data input devices (140) include at least one pressure sensor element (201, 202, 203), the at least one pressure sensor element (201, 202, 203) acting together with a pressure receiving element (220) in such a way that movements of the pressure receiving element (220) on a surface are detectable by the at least one pressure sensor element (201, 202, 203).

2. The telecommunications terminal (10) as recited in Patent Claim 1, wherein a character recognition unit (240) is provided, in particular for recognition of alphanumeric characters, and the movements of the pressure receiving element (220) detected by the at least one pressure sensor element (201, 202, 203) are convertible by the character recognition unit (240) into signaling information (550).

3. The telecommunications terminal (10) as recited in Patent Claim 1 or 2, wherein the telecommunications terminal (10) includes a transmitting unit (160) via which signals can be dispatched in dependence on signaling information (550).

4. The telecommunication terminal (10) as recited in Patent Claims 1, 2 or 3, wherein the telecommunication terminal (10) includes reproduction devices (120); the data input devices (140) include confirmation devices (142), particularly keys; the input signaling information (550) being representable by the reproduction devices (120), especially optically and/or acoustically, and being correctable by the confirmation devices (142).

5. The telecommunication terminal (10) as recited in one of the preceding Patent Claims, wherein the pressure receiving element (220) is formed as a writing tip (222).

6. The telecommunication terminal (10) as recited in one of the preceding Patent Claims, wherein input functions and operating functions of the telecommunication terminal 10

can be activated in dependence on signaling information (550), in particular menu-driven.

7. The telecommunication terminal (10) as recited in one of the preceding Patent Claims, wherein, in dependence upon signaling information (550), a radio mode, in particular for voice communication and/or for the exchange of brief messages, especially SMS messages, can be activated and can be operated, also in dependence upon the signaling information (550), in particular for the input of telephone numbers.

8. The telecommunications terminal (10) as recited in one of the preceding Patent Claims,
wherein, in dependence upon the signaling information (550) a memory mode can be activated, and also in dependence upon the signaling information (550), can be operated, in particular for entering telephone entries and/or notebook entries into a memory (192).

9. The telecommunications terminal (10) as recited in one of the preceding Patent Claims,
wherein, in dependence upon the signaling information (550), a calculator mode can be activated and operated, the signaling information (550) being processable in the telecommunication terminal (10) and calculation results being displayable, using the reproduction devices.

10. The telecommunication terminal (10) as recited in one of the preceding Patent Claims, wherein, in dependence upon the signaling information (550), an alarm clock mode can be activated and operated.

11. The telecommunication terminal (10) as recited in one of the preceding Patent Claims, wherein a data interface, in particular an infrared interface, is provided for transmitting data.

FIG. 1

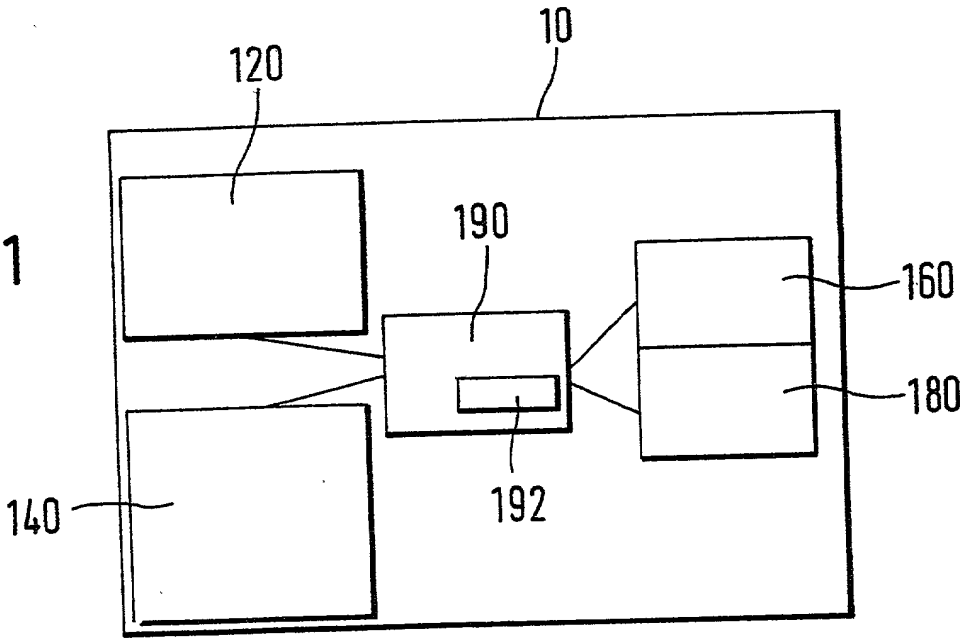
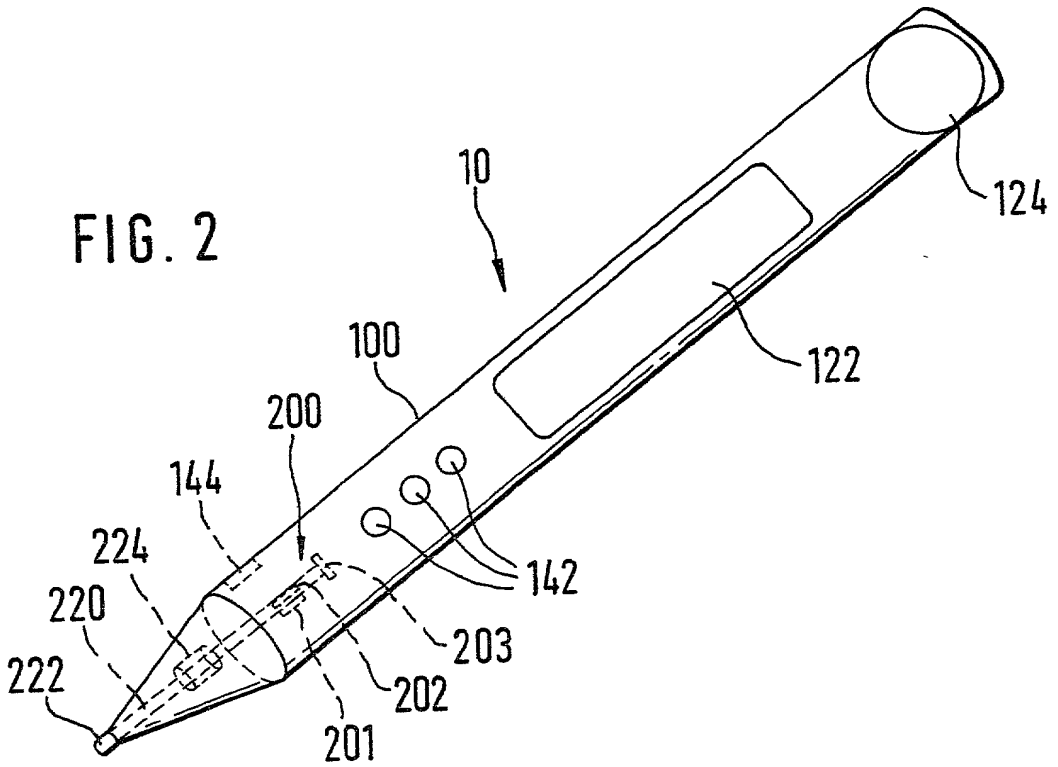

10
120
190
160
180
140
192

FIG. 2


10
124
100
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200
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224
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220
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222
202
201

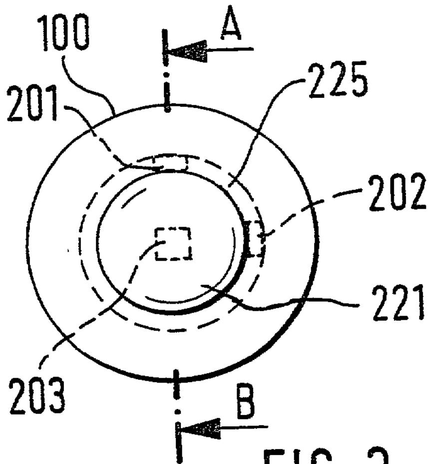

FIG. 3

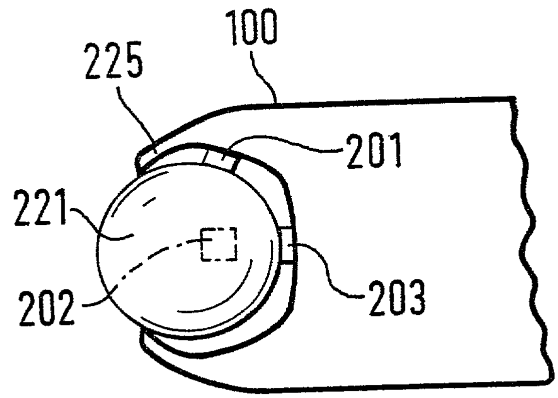

FIG. 4

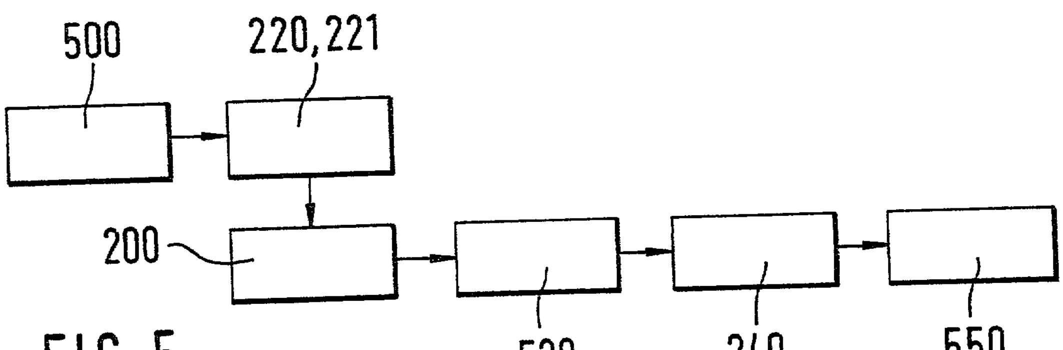

FIG. 5

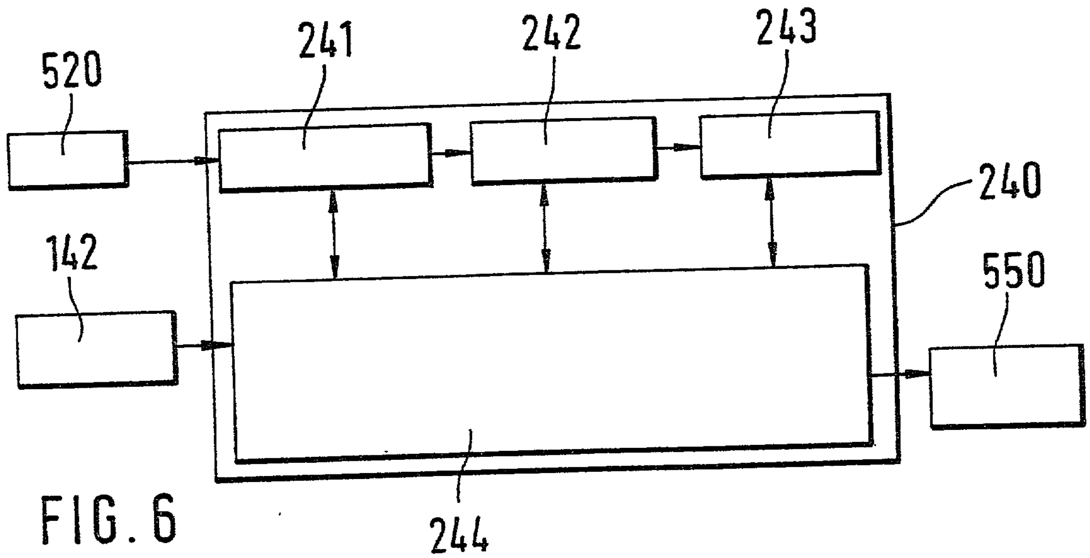

FIG. 6

10191/1833

COMBINED DECLARATION AND
POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled **TELECOMMUNICATION TERMINAL HAVING CHARACTER RECOGNITION**, and the specification of which:

[ ] is attached hereto;

[ ] was filed as United States Application Serial No. _____ on _____, 19__ and was amended by the Preliminary Amendment filed on _____, 19__.

[X] was filed as PCT International Application Number PCT/DE99/03611 on the 12th day of November, 1999.

[X] an English translation of which is filed herewith.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a). I hereby claim foreign priority benefits under Title 35, United States Code § 119 of any foreign application(s) for patent or inventor's certificate or of any PCT international applications(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

EP00362914 9
~~EP19504705~~

PRIOR FOREIGN/PCT APPLICATION(S)
AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. § 119

Country : Federal Republic of Germany

Application No. : 198 56 296.9

Date of Filing: December 7, 1998

Priority Claimed
Under 35 U.S.C. § 119 : [X] Yes [ ] No

I hereby claim the benefit under Title 35, United States Code § 120 of any United States Application or PCT International Application designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR
PCT INTERNATIONAL APPLICATIONS
DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. § 120

U.S. APPLICATIONS

Number :

Filing Date :

PCT APPLICATIONS
DESIGNATING THE U.S.

PCT Number :

PCT Filing Date :

I hereby appoint the following attorney(s) and/or agents to prosecute the above-identified application and transact all business in the Patent and Trademark Office connected therewith.

(List name(s) and registration number(s)):

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_____,	Reg. No. _____
_____,	Reg. No. _____

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full name of inventor: **Joerg-Michael HASEMANN**

Inventor's signature ____________ Date 14th August 2001

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